

Application No. 10/711,129  
Technology Center 2877  
Amendment dated February 19, 2007  
Reply to Office Action dated January 17, 2007

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claim 1 (Original): A self-calibrating optical reflectance probe system comprising:

an illuminant light source for illuminating a sample material;  
optical pickup means for collecting reflected light from the sample material; and  
an articulated white reference reflection standard adapted as an illuminant reference.

Claim 2 (Original): The self-calibrating optical reflectance probe system according to claim 1, wherein the illuminant light source comprises multiple illuminant light sources for redundancy.

Claim 3 (Original): The self-calibrating optical reflectance probe system according to claim 1, wherein the optical pickup means comprises

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multiple optical pickup fibers for diversity in reflected light detection.

Claim 4 (Original): The self-calibrating optical reflectance probe system according to claim 1, the probe system further comprising an optical line source adapted for wavelength calibration and verification.

Claim 5 (Original): The self-calibrating optical reflectance probe system according to claim 1, the probe system further comprising an articulated spectral reference standard for dynamic range verification.

Claim 6 (Original): The self-calibrating optical reflectance probe system according to claim 1, the probe system further comprising an articulated transmissive filter for dynamic range measurement and/or wavelength calibration and verification.

Claim 7 (Original): The self-calibrating optical reflectance probe system according to claim 1, the probe system further comprising an articulated shutter for dark reference.

Claim 8 (Original): The self-calibrating optical reflectance probe

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system according to claim 1, the probe system further comprising a window through which light passes from the illuminant light source, the window being curved to reduce reflected light from the window surface.

Claim 9 (Original): The self-calibrating optical reflectance probe system according to claim 1, the probe system further comprising a mount employing a single sanitary pipe fitting and clamp.

Claim 10 (Original): A self-calibrating optical reflectance probe system comprising:

- an illuminant light source for illuminating a sample material;
- optical pickup means for collect reflected light from the sample material;
- an optical line source adapted for performing wavelength calibration and verification;
- a window through which light passes from the illuminant light source, the window being curved to reduce reflected light from the window surface;
- a white reference reflection standard adapted for use as an illuminant reference; and
- means for articulating the white reference standard into and out of an

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optical path through the probe system.

Claim 11 (Original): The self-calibrating optical reflectance probe system according to claim 10, wherein the illuminant light source comprises multiple illuminant light sources for redundancy.

Claim 12 (Original): The self-calibrating optical reflectance probe system according to claim 10, wherein the optical pickup means comprises multiple optical pickup fibers for diversity in reflected light detection.

Claim 13 (Original): The self-calibrating optical reflectance probe system according to claim 10, the probe system further comprising an articulated spectral reference standard for dynamic range verification and/or wavelength calibration and verification.

Claim 14 (Original): The self-calibrating optical reflectance probe system according to claim 10, the probe system further comprising an articulated transmissive filter for dynamic range measurement and/or wavelength calibration and verification.

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Claim 15 (Original): The self-calibrating optical reflectance probe system according to claim 10, the probe system further comprising an articulated shutter for dark reference.

Claim 16 (Original): The self-calibrating optical reflectance probe system according to claim 10, the probe system further comprising a mount employing a single sanitary pipe fitting and clamp.

Claims 17 through 20 (Canceled)